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ABSTRACT

This report develops a topology of approaches to high school dropout prevention, and uses it to examine and review the effectiveness of existing programs, and to identify major gaps in current practice and research. Research on dropouts was reviewed to identify the kinds of students who drop out and their reasons for dropping out. Based on this review, a topology was developed of substantive program components, elements that change the environment, and experiences of students that seem to alleviate the students' reasons for dropping out, or to increase the students' motivation to remain in school. The four categories of the topology are the following: (1) success in school; (2) positive relationships in school; (3) relevance of school; and (4) outside interferences. Theories of student motivation to stay in school or drop out, substantive approaches to dropout prevention, and specific dropout prevention programs were then grouped and discussed in relation to the categories of the topology. Conclusions include the following: (1) few evaluation studies of dropout prevention programs meet reasonable scientific standards; (2) despite the many dropout prevention programs being implemented by schools and districts, little is actually known about what works to reduce the dropout rate. Brief descriptions of some of the more comprehensive dropout programs in the country are provided. A brief list of footnotes and a list of 82 references are also included. (FMW)

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July, 1988

AN EXAMINATION OF THE ASSUMPTIONS AND EVIDENCE FOR ALTERNATIVE DROPOUT PREVENTION PROGRAMS IN HIGH SCHOOL

Gary Natriello, Aaron M. Pallas, Edward L. McDill, James M. McPartland and Deirdre Royster

The Johns Hopkins University

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An Examination of the Assumptions and Evidence

For Alternative Dropout Prevention Programs in High School

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The Center

The Center for Social Organization of Schools has two primary objectives: to develop a scientific knowledge of how schools affect their students, and to use this knowledge to develop better school practices and organization.

CSOS works through various research programs to achieve its objectives. A major effort is devoted to the study of elementary and middle schools under the sponsorship of the Office of Educational Research and Improvement, Department of Education. This work is conducted at CSOS by the Center for Research on Elementary and Middle Schools.

This report develops a typology of highout school dropout prevention approaches, and uses the typology to review the effectiveness of existing programs and identify major gaps in current practice and evidence.

Abstract

This report develops a four-category typology of high school dropout prevention programs, identifies potentially effective approaches to prevention in each category, and examines the effectiveness of specific existing programs in each category. The four categories of the typology are (1) success in school, (2) positive relationships in school, (3) relevance of school, and (4) outside interferences.

The report finds few evaluation studies of dropout prevention programs that meet reasonable scientific standards, and concludes that despite the many prevention programs being implemented by schools and districts, we still have little knowledge about what actually works to reduce dropout.

Introduction

At a time of widespread attention to the problem of the high school dropout, much more has been written about the predictors of which students will drop out than about programs to alleviate the problem. A few compendia of program descriptions have appeared recently (Orr, 1987a, b; National Governor's Association, 1987; U.S. General Accounting Office, 1987; OERI Urban Superintendents Network, 1987; Clifford, 1986; Hahn and Danzberger, 1987; Hahn, 1987; Council of the Great City Schools, 1987), but most of these lists are not organized in ways that help one understand the distinct categories or contrasting theories that may underlie different approaches to dropout prevention.

Similarly, most scientific research in the area has focused on the student precursors of dropping out rather than on the programs that may reduce these risks. Thus, numerous studies are concerned with the preceding factors of student family background or personal experience that correlate with the probability of leaving high school before graduation; few studies have evaluated the impact of interventions intended to reduce dropping out.

The goal of this paper is to develop a typology of approaches to dropout prevention, and to use the typology to examine and review existing approaches to dropout prevention and identify the major gaps in current practice and evidence.

First, we will review research on the kinds of students who are more likely to drop out of school, including investigations of the reasons students themselves give for not continuing in school, to establish broad categories of the variables that might be addressed in dropout prevention programs. We will discuss how these categories relate to prominent theories of the sources

of student motivation at school. The broad categories of our typology will also be compared to the few other attempts we have found to organize dropout prevention programs into a small number of separate dimensions.

In the second part of the paper, we will identify specific prevention approaches in actual practice that fall into each category of our typology. We will identify some prevention programs that place highest priority on each of the main typology categories. When discussing each category we will also list some multi-faceted programs that include components in the category in combination with components from other categories. Evaluation evidence on the impact of specific dropout prevention programs will be reviewed whenever it exists.

Finally, we will review and evaluate our typology to identify gaps in practice (potentially useful prevention approaches that are rarely or never tried); to show gaps in evidence (widely used approaches where evaluations of effects are weak or absent); and to comment on inadequacies of the typology (actual dropout prevention approaches that do not fit well into one of the available categories or theories of student motivation that fall outside of the typology dimensions).

Developing a Typology

In deriving a typology of programs to address the dropout problem, it is important to distinguish between delivery elements and substantive components.

Delivery elements involve decisions about the timing, targeting, and management of a dropout policy or program. Timing decisions include whether the program is directed to students in elementary or secondary grades; targeting decisions include whether a program is addressed at "at risk" students" to prevent dropping out or at students who have already left school to help them "recover" their education by returning to a different type of school; management decisions include the responsibilities assigned to different agencies or personnel in a dropout program.

Substantive issues concern those dropout program elements that change the environment or experiences of students in the program, in an attempt to alleviate student reasons for dropping out or to increase students' motivation to remain in school. It is likely that different elements of timing, targeting or management could be used with the same substantive program components, even though in practice some elements may be more often associated with certain substantive components than others.

Our typology will be developed for substantive components of approaches to the dropout problem, especially substantive approaches addressed to students in the secondary school grades. We will note when specific substantive components we categorize are most frequently associated with particular strategic decisions, but our main goal is to develop a typology derived from the main reasons students seem to drop out and related theories of students' educational motivations.

A Four-Category Typology

We have derived a four-category typology from our review of investigations of the kinds of students who are most likely to drop out of school (Ekstrom et al., 1986; Rumberger, 1987; Hahn, 1987; Pallas, 1985; OERI Urban Superintendents Network, 1987; U.S. General Accounting Office, 1986; National Committee for Citizens in Education, 1987, 1988; Fine, 1987; Wagenaar, 1987). Two categories concern different dimensions of a student's experiences in school and two categories deal with outside conditions.

Two Dimensions of a Student's School Experiences

The most likely candidates for dropping out of high school are (1) students who have serious difficulties in passing their school tests and courses, and (2) students who do not believe that anyone in an adult role in their school personally cares about their welfare. The first dimension is a student's opportunity for success in school; the second dimension is the character of human relationships between a student and adults in the school.

Success in School

One of the strongest correlates of dropping out found in research on students is the lack of academic success in school. Students who more often get low grades, fail subjects, and are not promoted to the next grade have a much higher chance of leaving school before high school graduation. Simply put, many students who have trouble meeting the academic demands of school will leave rather than persist in the face of the strain and frustration they often experience trying to pass their courses.

Student difficulties with school work can derive from three sources: different aspects of the academic criteria set by the school, the student's own current abilities in each subject area, and the student's willingness to direct efforts toward learning and performance on academic tasks. Moreover, studies of the sequence of events that often create a student dropout indicate that the mismatch between school demands and student behaviors can grow over time; thus opportunities for success become more remote and motivation to remain in school becomes weaker. It is useful to examine the different aspects of the match between school demands and student behavior in considering the points for possible intervention in dropout prevention programs.

Positive relationships in school

Although quantitative scientific evidence is not extensive, many qualitative studies of the student dropout strongly suggest that many dropouts feel that no one at school pays attention to them or cares about their progress. Even beyond feeling ignored or unimportant at school, many of the student dropouts seem to feel that the goal of school officials is to rate and sort them rather than to find ways to help them be successful.

Two Aspects of Outside Conditions

Research shows that dropping out of high school is a behavior that often accompanies other behaviors that form a syndrome of troubled youth, such as delinquency and crime in and outside of school, drug or alcohol abuse, and teenage parenting outside of marriage. Although the causal direction is not clear between the school and non-school problems of troubled youth (Bachman, 19__), outside school difficulties need to be addressed in many cases before improvements at school can be expected. For example, better attention to school demands may not be possible for some individual students who first need services to assist them as teenage parents or programs to relieve their drug dependencies.

Research also shows that family and neighborhood circumstances are significant correlates of poor performance at school. Students from homes that provide weak resources for their schooling, because parents are poorly educated themselves or otherwise unable to support school work, are more likely to fail courses at each grade, to be left back one or more times, and to drop out before finishing high school. Students from neighborhoods that have high levels of unemployment, crime and family instability are also more "at risk" of failing to complete school.

When students from disadvantaged backgrounds and decayed neighborhoods who drop out are interviewed, two main themes emerge: the lack of relevance of school to their future and the interference of outside concerns with school.

Relevance of school

Many students from disadvantaged families and poor neighborhoods fail to see the value of continuing school for their futures. Surrounded by unemployment or otherwise perceiving a lack of career opportunities for themselves, many students do not believe further schooling will pay off for them. Dropouts may feel that, in general, further schooling makes little sense for their later lives, or may be unable to make the connection between the specific courses they would be taking in school and what they feel they need to succeed in life.

Outside interferences

Many dropouts are so overwhelmed by their own personal problems they do not have the energy or motivation to give much attention or effort to their school responsibilities. For example, a teenage mother with no husband cannot succeed as a high school student without a great deal of help with her childrearing chores. The high school student who works many hours after school each day may not have the time and energy to give to achieve success on school assignments.

Applying the Typology

In the sections that follow, we examine, for each of our four categories, theories of student motivation to stay in school or drop out, substantive approaches to dropout prevention, and specific dropout prevention programs.

Category One: *Opportunities for School Success*

One of the most often noted reasons for the high dropout rate in American schools is the lack of an appropriate match between the academic program of the school and the skills and interests of students. Indeed, the failure of the academic program of the school to meet the needs of students is often cited as a major cause of the dropout problem (Wehlage and Rutter, 1987).

Accounts of the problems with the academic program show three aspects. First, for many students the academic program is too difficult and overwhelming. Second, for other students the academic program is not sufficiently challenging and engaging. Third, for many students the academic program is simply not an important part of their lives, that is, it is not salient in their thinking about their priorities. Each of these failures of engagement of the skills and interests of students with the school program can lead students to drop out of school.

Unattainable Standards. For many students who eventually drop out of school the problem with the academic program is that the curriculum presented is too difficult for them to achieve respectable grades. In the nationally representative High School and Beyond Study, 30% of the students who dropped out of high school between the tenth and twelfth grades reported that poor grades were a reason for leaving (Ekstrom, Goertz, Pollack, and Rock, 1987). These students could not achieve success with the school program presented to them.

There are two dimensions to the problem of lack of success in school. First, students whose every effort fails to elicit a positive response from the school come to view the school organization as non-responsive to them and beyond their control. It is interesting to note that students who drop out of school do not seem to fare any worse in the development of their self-esteem or sense of internal locus of control than students who remain in school (Wehlage and Rutter, 1987).

Unchallenging Standards. While many students leave school because they find the academic program too difficult and overwhelming, others leave because they find it insufficiently challenging. Sometimes students encounter teachers whose expectations for them are too low. For example, Natriello and Dornbusch (1984), in a study of the standards for student academic performance in classrooms, report that cutting class was higher in those classrooms where teachers' standards for student performance were lower than in classrooms where the standards were high. They conclude that students were more likely to cut classes with low standards because they knew that they would not miss much. This is another form of the non-responsiveness discussed earlier. Non-responsiveness can involve both the absence of rewards for effort as well as the absence of punishments for lack of effort.

Irrelevant Curriculum. Schools may fail to engage students for a third reason. For many students, the curriculum of the school seems irrelevant. Some students see the school curriculum as not useful. Other students, particularly students who are not members of the white middle

class, see the school curriculum as alien to the culture in which they are growing up (Fine, 1987). For example, for some black students, to participate actively in the school curriculum means renouncing their black community and "becoming white."

In light of these reasons that students become disengaged from the school program, three basic strategies can be used to counteract the lack of match between the school program and the needs of students. First, it is possible to modify the academic standards of the school curriculum to accommodate students more effectively. Second, students' skills and abilities might be strengthened to permit them to meet the expectations inherent in the school curriculum. Finally, the school academic program can be made more salient to the lives of students. Each of these strategies should strengthen the connection of students to the school program. Each of these basic strategies has taken many forms in attempts to ameliorate the dropout problem in U.S. schools.

Programmatic Strategies for Adjusting School Standards to Fit Students

If students become disengaged from school because they find the standards too difficult or two easy, then one strategy to minimize disengagement would be to develop standards that meet the needs of students, that is, standards that are challenging but attainable. A number of methods have been suggested and implemented for trying to do this.

Individualization. Perhaps the most widely discussed strategy is that of individualizing the curriculum so that it is tailored to each student's ability. An individualized curriculum and instructional strategy is designed to present each student with attainable standards for academic performance. In so doing, students experience both academic success with its attendant benefits to their self esteem and a more responsive school organization in reaction to their efforts.

Diagnosis and Placement. Of course, the matching of the level of difficulty of the school curriculum, whether individualized or not, to the ability levels of students requires improved

diagnostic strategies on the part of schools. In the absence of adequate diagnostic information it is impossible to tailor the curriculum to the students' ability. At the very least, such diagnostic techniques should be used to determine when students are ready to move on to a new grade level. Such a program is in operation in Minniapolis where criterion-referenced tests are administered each year to students in kindergarten through the ninth grade "...to track students' academic progress and to judge whether they have mastered the knowledge required to proceed to the next grade." (OERI Urban Superintendents Network, 1987).

Evaluation on Effort and Progress. One key strategy for addressing the lack of school responsiveness to academic performance for students with records of consistently poor performance is an alteration in the process for evaluating student work. Natriello and McPartland (1987) have shown that teachers make use of four evaluation or grading techniques in their classrooms: evaluation based on set external standards, evaluation based on the relative performance of the class, evaluation based on student effort, and evaluation based on the growth or change in student performance level. Only the last two strategies provide low performing students with an opportunity to obtain anything other than poor evaluations. Thus, the evaluation of student performance in terms of their effort and/or their progress may be effective in retaining students in school.

Multiple-Abilities Curriculum. Another approach to providing opportunities for success for students who would otherwise experience consistent failure in the classroom involves a restructuring of the tasks of the classroom so that they draw on a wider range of ability dimensions. Such multiple-ability classrooms (Cohen, 1986; Rosenholtz, 1977) attempt to move beyond the narrow range of academic tasks, all of which rely upon reading skill, so that every student can experience some success. In the multiple-ability classroom, the intention is for all students to find some task at which they can experience a sense of competence.

Raising Standards. To combat the low standards which lead to students not being sufficiently challenged in school, there are strategies which seek to raise standards in a demonstrable way. Whether it is the "high standards" of the effective schools movement, the high aspirations of Operation PUSH, the inclusion of esoteric knowledge such as the Latin taught by Marva Collins, or the accelerated schooling model of Levin (1987), the attempt is to be explicit about having high standards that are worth achieving.

Programmatic Strategies for Enhancing Student Abilities and Skills to Meet the Demands of the School Curriculum

Adjusting the standards of the school program may only go so far in closing the gap between the demands of the curriculum and the abilities and skills of students. A second basic strategy to improve the match between students and schools involves techniques for strengthening the skills and abilities of students so that they are more able to meet whatever demands the school program may entail. Various programmatic approaches have been developed with this objective.

Remedial Instruction. Remedial instruction in one form or another has often been used to attempt to bring student skills up to the level demanded by the school curriculum. Such remedial services take a variety of forms -- from special classes such as those offered under the provisions of Chapter 1 (Kennedy, Birman, and Demaline, (1986) to programs which involve a total alteration of the entire school program with the provision of additional resources throughout the program. Such an approach is envisioned as part of Levin's (1987) proposed accelerated school where the goal is to accelerate students' academic growth.

Remediation also occurs in special programs in addition to the regular school program. The Comprehensive Competency Program of Washington, D.C. is a self-paced, individualized, and competency-based program which packages the best available educational technologies developed in Job Corps and other programs and makes them available to public schools and other

institutions. Students in CCP attend learning centers where they work at their own speed on academic skills, life skill competencies such as reading the newspaper and calculating overtime, and pre-employment skills such as job seeking (Hahn and Danzberger, 1987).

Peer Tutoring. A particularly interesting approach to providing students with additional assistance when instructional resources are limited is the use of peer tutors to help students experiencing difficulty with the school curriculum. Both the tutors and the students being tutored have reported improved attitudes toward school as a result of participation in peer tutoring programs (Ashley, Jones, Zahniser, and Inks, 1986). Bloom (1984) has noted that students in effective peer tutoring programs achieve at higher levels than students in conventional learning or those in mastery learning situations.

Programmatic Strategies for Increasing the Salience of the School Curriculum

Whether students have sufficient skills to meet the standards of the school program may be unimportant if they are not initially motivated to try to perform in school. For many students the curriculum of the school is simply not perceived as important enough or salient enough to motivate them to devote the required effort to succeed. There are various approaches that have been used to make schools more salient to students.

Multi-Ethnic Curriculum. Some programs have made use of a multi-ethnic curriculum to appeal to minority students who view the dominant white culture as foreign.

Career Education. Other programs have incorporated some form of career education to communicate explicitly just how the school curriculum can be connected to future careers for those who are successful. An example of a contemporary career education program is the New York City Job and Career Center. Using space and counselors provided by the New York State Department of Labor, the Center sponsors field trips, exhibits, visual displays, and discussions from the City's major employers. The services of the Center are available to students in public

and private schools, to dropouts, and to unemployed adults (Commission on Work, Family, and Citizenship, 1988).

Incentives. Another approach to making the program of the school more meaningful to students is to attach some type of incentive to school performance. The Cleveland Public Schools have adopted a program which relies on cash as an incentive. With funding from corporations and local foundations, the Cleveland program pays students in grades 7 to 12 $40 for each A, $20 for each B, and $10 for each C. This money is usable for postsecondary education (Commission on Work, Family, and Citizenship, 1988).

The STEP Program

Many programs have attempted to overcome the lack of fit between the needs and abilities of students and the academic demands of the school. We have selected the STEP Program for special examination because it combines several features which promise to make it a particularly potent program.

Program Design

The Summer Training and Education Program (STEP) developed by Public/Private Ventures with support from the Ford Foundation is designed to respond to a number of problems that lead low-income youth to drop out of school before graduation.

> "The STEP model aims to increase basic skills and lower dropout and teen pregnancy rates by providing poor and under-performing youth with remediation, life skills and work experience during two consecutive and intensive summer programs, with ongoing support and personal contact during the intervening school year." (Sipe, Grossman, and Milliner, 1987:i).

The program requires only moderate additional resources because it builds on existing public school programs and the work experience provided by the federal Summer Youth Employment and Training Program.

During each summer session participants earn the minimum wage for a full day, five days a week for six to eight weeks. They engage in three core activities during this time. First, they receive 90 hours of group and individually paced instruction in basic reading and math skills. Twenty percent of the time is spent on computer assisted instruction, and 20 minutes a day are spent on silent reading.

Second, participants receive 18 hours of instruction on responsible social and sexual attitudes and behavior. Lectures, discussions, films, role-playing, field trips and outside speakers are used to stress the need to set goals, plan for the future, and take responsibility for decisions about sexual activity.

Third, participants spend at least 80 hours in part-time work provided by the federally funded Summer Youth Employment and Training Program (SYETP). During the school year following the initial summer session, students participate in group activities and meet regularly with mentors/counselors who refer them to needed services, monitor their attendance and progress, and encourage them to return for the second summer session (Sipe, Grossman, and Milliner, 1987:iii-iv).

To be eligible for participation in STEP, students must meet three conditions -- they must be 14 or 15 years old, from low-income families, and be performing below grade level in reading or math. The program is being conducted at five demonstration cities: Boston, Fesno, Portland, San Diego, and Seattle.

Evaluation Design

One of the strengths of the design of the STEP program is the inclusion of a rigorous evaluation. The demonstration project includes random assignment of youth to treatment and control groups, with members of the control groups working full time on SYETP jobs. Students in both the control and treatment groups are tested at the beginning and end of the summer with the Met-

ropolitan Achievement Test. Data on attendance, standardized test scores, credits earned, grade advancement, and dropout status are collected from each school district. Pre and post-program questionnaires assess attitudes, knowledge and behavior regarding sexual and social issues, and career awareness. About 2,250 students are in the treatment group and about 2,250 are in the control group (Sipe, Grossman, and Milliner, 1987:iv).

Initial Results

The STEP program has served or is continuing to serve three cohorts of youths. The first cohort participated in the program in the summers of 1985 and 1986. The second cohort participated in the program in the summers of 1986 and 1987. The third cohort participated in the program in the summer of 1987 and will participate again during the summer of 1988. Data on the impact of the STEP program are available for the first cohort for 1985 and 1986 and for the second cohort for 1986.

During the summer of 1985 the STEP program was able to reduce by half the learning losses that would have occurred over the summer without the program. Program participants outscored those in the control group in both reading and math by about one-quarter of a grade equivalent. However, both program participants and those in control group had lower test scores at the end of the summer than they had at the beginning of the summer; control group losses were significantly larger than those experienced by students in the program.

The school-year performance of students in this first cohort was also examined. Attendance, test scores, credits earned, grade promotion, and dropout behavior were examined. The only program effect detected was for grade promotion -- treatment youth were 22 percent less likely to fail than controls.

The net impact of the program on students in the first cohort during the summer of 1986 was assessed in one site, San Diego, where participants in the control group were given a second

summer of work experience in exchange for being tested. In this site control group youth lost significantly more than treatment youth in both reading and math. Participants in the program showed significant losses in reading and little change in math. However, when student performance over the entire 15-month period of the program is considered, students in the program experienced a small, non-significant loss in reading and a substantial gain in math.

Based on the experience with the first cohort, the program was strengthened for the second cohort. The results are more promising. Participants in the control group of the second cohort experienced losses ranging from about three-quarters of a grade to a full grade equivalent in reading and about one-half of a grade equivalent in math. The impact of the program on reducing these losses was more than double what it had been for the first cohort in the summer of 1985. Most of the learning loss in reading was eliminated, with STEP youth scoring six-tenths of a grade equivalent higher than control youth. Learning loss in math was eliminated, and a gain was produced. At the end of the summer students participating in the STEP program scored slightly higher than they had at the beginning of the summer and eight-tenths of a grade equivalent higher than those in the control group (Sipe, Grossman, and Milliner, 1987:iv).

Based on these results, the STEP program appears to offer a viable model for improving the academic performance of at-risk youngsters. It represents one strategy for offering extended basic educational programming and practical knowledge to potential dropouts, and linking such opportunities to valued economic incentives.

Category Two: *Positive Relations with School Adults*

One theory of why youth drop out of school focuses on the social bond between the student and the school. Students who have a weak attachment to the school are likely to drift away and eventually to drop out. Students who maintain a strong bond with the school are likely to continue to attend school regularly and are more likely to graduate.

Programmatic Strategies to Strengthen Attachments

There are several ways in which young people interact with their school environments. Students maintain relationships with peers, teachers, and the school culture itself. Schools have developed strategies to strengthen these attachments, both separately and in combination. We have identified three ways in which schools can attempt to strengthen students' bonds to the school: by influencing their associations with adults in the school, with their school peers, and with the school climate.

The first strategy involves creating a "mentor" relationship linking students to adults in the school. Most secondary schools are large, relatively impersonal places. High schools are designed and organized to process large batches of students. They also are highly differentiated, so that a student may have a different teacher for every period of the school day. Conversely, a given student may be one of 150 students or more to be taught by a particular math teacher or English teacher. The end result is that students rarely have sustained social contact with their teachers.

The quality and quantity of contact that students have with other school staff also typically are inadequate. Although a student usually is assigned to a single guidance counselor, for instance, student-counselor ratios are frequently as high as 500 students to each guidance counselor. Some students demand less attention than others, but it still is highly unlikely that at-risk students can gain enough access to their counselors to forge strong social bonds. Under these circumstances, students may well conclude that no one at the school cares about what happens to them. To stem this trend and its likely consequences, the school must reorganize the school day so that students have closer, more frequent, and more positive contact with adults in the school.

The second strategy to strengthen students' attachment to school operates through students' relations with their peers. Surveys of students and ethnographic studies of schools have long

suggested that adolescents are not opposed to the *idea* of school, and many students like school. Adolescents spend more than 40% of their waking hours in school during the school year. It is not surprising, then, that the school becomes a locus of social activity for youth.

As some youth leave school, however, the balance of in-school social contact to out-of-school contact begins to shift. Adolescents want to spend time with their friends. If most of a student's friends are no longer attending school, the student may stop going too, to keep contact with his or her peers.

For schools to hold such students in schools, they must develop ways to promote peer networks providing support and attachment. The major vehicle for this is a program of extracurricular activities which allows students to interact with their peers at the school. These before- and after-school activities include sports, recreation, and school clubs, some of which double as academic enrichment programs. While these activities may be intrinsically interesting to adolescents, they mainly serve to allow teens to socialize in a setting officially sanctioned by the school.

Another way to strengthen peer attachments in the school context is to socialize new students into the life of the high school. This strategy uses orientation programs as an in-service socialization mechanism. In some settings, new students are paired with students who have been in the school for some time. The more experienced student can then act as a mentor to the new student, providing information about the school and lending social support. New students are thus guaranteed that they will know someone in the high school, thereby reducing its impersonal and foreign character and helping to forge a social bond between the new students and students already in the school.

Mentoring programs like this can have positive consequences for the mentor as well. Acting as mentors gives students a sense of responsibility and of being needed. The mentor is aware

that the school is counting on him or her to perform a valuable function and that the new student is relying on the help of the mentor. This sense of being needed may be related to better attendance among at-risk youth who serve as mentors. This strategy has also been used in academic instruction, such as in cross-age peer tutoring programs in which low-achieving (at-risk) students tutor younger students.

The third strategy for strengthening attachment to schools is based on linking the student to the institutional climate. The goal here is to foster a climate of interest in the student. We have already noted that the size of most secondary schools renders them impersonal, and students can pass through a high school with the sense that the school has had little effect on them and they have had little impact on the school. Schools must take active steps to integrate the student into the culture of the school.

This problem of poor integration into the school culture is not unique to dropout prevention efforts, and in fact is integral to the well-known effective schools model (Edmonds, 1979). The effective schools model is predicated on the belief that students confronting clear and consistent goals in a safe, orderly climate will succeed in school. In addition, Newmann (1981), writing on student alienation in high schools, has suggested that student participation in school policy and management may help prevent dropping out.

One way to promote this linkage is to convince students that they will get a fair shake at the school. This involves making the school rules explicit, so that all students know them; making them appear fair; and applying them consistently to students. Gottfredson and Gottfredson (1985) found that schools in which students reported that the rules were fair and clear experienced less disruption than schools in which students reported inconsistent and unfair applications of rules. They did not conclude, though, that student participation in rule-making was related to levels of school disruption.

However, it is plausible that students will be more attached to settings where they can exercise some control over their environment. This might take the form of student control over which school to attend, or course selection, or being able to choose a desired school-related extracurricular activity. Among at-risk middle school students in New York City, for example, those reporting greater control over planning their programs tend to like school more than those students reporting less control, although there is no evidence of a net effect on attendance rates (Grannis et al., 1988).

Another way of linking students to the school culture involves anticipatory socialization -- providing junior high school students opportunities to learn what the high school is like and what is to be expected of them -- so that when they do go on to high school, the setting is not so mysterious or foreboding. In New York City, this strategy is under the rubric of linkage programs, involving collaborative efforts between junior high schools and high schools. Large numbers of at-risk middle school students report listening to students or adults from a high school talk about what the high school is like. But far fewer students report having gone to a high school for a special event or after-school activity, or with a class. Moreover, there is little evidence of sustained efforts at linking middle school students to high schools; most attempts are one-shot deals. This may account for why linkage activities seem ineffectual in promoting student outcomes in New York City (Grannis et al., 1988).

The Alternative School

The school program which ties these three strategies together best is the alternative school. Alternative schools are typically designed as nontraditional educational programs marked by considerably more flexibility in educational activities than is found in traditional school settings. Alternative schools usually are smaller than traditional schools, with lower student-teacher and student-counselor ratios.

A structural feature that is common to many alternative schools, delinquency prevention programs, and dropout prevention programs is their small size. Among traditional schools, small size is associated with lower levels of school violence (Diprete, 1982; McPartland and McDill, 1977; Garbarino, 1978; Gottfredson and Gottfredson, 1985) and higher rates of student participation in extracurricular activities (Barker and Gump, 1964; Morgan and Alwin, 1980). Garbarino (1980) also speculates that smaller schools promote higher levels of social interaction among students.

In small schools with higher ratios of adults to students, students have more direct social contact with both school staff and other students. Smaller school environments are thought to be less anonymous than larger schools. The greater amount of social interaction may promote an attachment to the school by making the student feel valued and wanted. As Gottfredson and Gottfredson (1985:171) put it, "School size is very likely related to the availability of opportunities for students to engage in a variety of roles that provide a stake in conformity."

Dropout prevention programs typically are small, particularly those that have adopted a case management approach, where a battery of services are targeted to specific youngsters thought to be at risk of dropping out of school. Some programs operate as a component within a larger environment, such as a school-within-a-school. Others are physically segregated from the traditional school environment. Physical separation tends to highlight the distinctive features of the dropout prevention program, and students may be more disposed toward an educational setting that does not remind them of their regular school, often a site of failure and frustration. On the other hand, if the goal is to reintegrate the student into the original school environment, physical segregation may be disruptive. Physical separation also may serve to label the at-risk student, making it harder to "mainstream" him or her at some later date. In many alternative school programs, however, there is no intention to lure these students back to the traditional school environments in which they floundered earlier.

Gold and Mann (1984), in their study of effective alternative schools, point to the school's flexibility as key to the academic prospects of at-risk youth. In their view, a flexible school does not impose conventional rules governing teacher-student interactions and is responsive to variations in students' needs and moods in the planning of daily activities. They (1984:156) state:

> "...(O)ne option for an alternative program is to house it in a building separate from the conventional high school that the students would ordinarily attend. Our observation of the schools in this study suggest to us that being in separate buildings contributed a great deal to the flexibility of the programs. The more casual comings and goings of alternative students, the occasionally higher noise level, the regular availability of coffee and a place to smoke, and other deliberate informalities that created the ambiance of the alternative programs probably could not have been tolerated in the midst of a conventional comprehensive secondary school. At the same time, the potential danger of stigmatization by the implication of isolation and quarantine did not materialize, according to our data. The proximity of the separate facilities to the conventional junior and senior high schools was useful because it facilitated the attendance of students in selected classes and students in selected classes and students' transitions back to the conventional schools."

Middle College High School

An example of an alternative high school that is widely cited as exemplary is Middle College High School in Long Island City, New York. Middle College is a selective alternative high school located on the campus of LaGuardia Community College. The following description is adapted from Eisman (1986).

The classes at Middle College are small, and there are more guidance counselors than in other schools. The school is divided into small "houses," each with its own students and staff. Teachers and students know each other personally, and the environment is safe and friendly. There are no bells to signal the beginning or end of classes as in other schools. Applicants to the school are interviewed by students already in the school as part of the selection process, and the school's student council plays a role in resolving discipline disputes. The school has an extensive array of extracurricular activities and emphasizes the use of the cafeteria for student socializing. Students are encouraged to exercise choice in scheduling their classes.

Middle College also has tutoring available before or after school for every course, and no one fails a course -- a failed course is repeated, and no grade is assigned. Also, Middle College students spend one-third of their school year working at unpaid internships in various settings outside of the school.

Middle College is widely regarded as a highly successful alternative school program, and the program model is currently being considered for replication in several sites. The attendance rate at Middle College is higher than the New York City average, the dropout rate is lower than the city average, and the rate of acceptance into postsecondary institutions is higher than the city average. Because of the selectivity of the program, though, it is difficult to say what the actual effects of attending Middle College High School are. There are no careful evaluations providing convincing evidence on how the kinds of students enrolling in Middle Colege would have fared had they been in some other educational setting.

Category Three: *Relevance of School to Student's Future*

A twenty-five year tradition of informed speculation and empirical research in the educational and social science literature supports the idea that much psychological alienation and rebellious behavior by working- and lower-class adolescents (including dropping out of school) is partly explained by their perceptions that social conformity and academic achievement in school are not clearly linked to their future status in society. This is often referred to as the "articulation" hypothesis, which was specified and tested in 1964 by Stinchcombe in his widely cited study of a working class high school in California: Much psychological and behavioral nonconformity occur in school when adult status is perceived by adolescents as not being clearly linked to or articulated with present performance <1>.

The articulation hypothesis, as applied to the dropout problem, holds that significant numbers of students leave school because they fail to see any connection between remaining in

school and improving their job prospects. Such a perception seems widespread in many urban settings which have high rates of youth unemployment, reinforcing the perception that a high school diploma is no guarantee of a job (Natriello, Pallas, and McDill, 1986, p. 16). Although the empirical status of the proposition is a subject of debate (see eg., Wheeler, 1967, pp. 1019-1020), it has remained popular in the ensuing years <2>, especially among sociologists and anthropologists of education.

Given the continued currency of the articulation hypothesis in attempting to account for the unsteady transition from school to work for a sizeable segment of youth, it is important to evaluate the effectiveness of different programmatic responses (strategies, methods, and techniques) which have been proposed and implemented in recent years to convince at-risk students of the value to their adult status of performing adequately in school and remaining until graduation.

Programmatic Strategies for Articulation

In the past decade a variety of programmatic approaches for "bridging the gap from school to work" (Commission on Work, Family, and Citizenship, 1988, Chap. 4) have evolved or have been developed. All of these efforts attempt to demonstrate to adolescents a meaningful link between school learning and success in the labor market. These programs attempt to provide clearly defined incentives for students to remain in school and to perform to the maximum of their abilities. These programs tend to be guided, either implicitly or explicitly, by a "functionalist economic" model (Fuller, 1981, p. 170) of schooling which relies heavily on human capital theory advanced by labor economists. Human capital theorists view "...education as an investment that, by increasing an individual's human capital, knowledge or expertise will pay off in the future in the form of increased earnings" (Hurn, 1985, p. 52) <2a>.

These efforts include updated vocational educational programs involving a blend of transferable vocational skills and basic skills training (Walker, 1988), school-business partnerships, and

part-time employment which is dependent upon satisfactory school attendance and performance. These incentive programs often involve partnerships between schools and the private sector (Committee for Economic Development, 1985, Chap. 5). Two of the most visible of these are the Boston Compact, formally established in 1982 (Schwartz and Hargroves, 1986-87), and the "I Have a Dream Foundation," founded by the businessman-philanthropist Eugene Lang in 1981. We provide a brief overview of each of them.

The Boston Compact

The Boston Compact is a formal written agreement among leaders of the Boston City government, the public schools, labor unions, and the business community "...which established a system of priority hiring for students graduating from the public schools in return for the school system's assurance that it would take steps to improve the education and qualifications of its graduates" (Schwartz and Hargroves, 1986-87, p.14). The program has become so popular that local adaptations of it have been established in at least thirty other communities around the country (Commission on Work, Family, and Citizenship, 1988, p. 45).

The Boston school system, in its participation in the Compact, has established firm goals such as increased attendance, lower dropout rates, and mastery of basic skills for all of its students. Each school in the system was required to submit and implement a plan for mastery of basic skills in reading and math as measured by minimum competency tests (MCT) after 1986 (Schwartz and Hargroves, 1986-87, p. 21). The business sector and higher education community conduct a variety of collaborative efforts with the school system, including partnerships with individual schools, collective guarantees for summer jobs, part-time work during the school year, jobs for high school graduates, cooperative education programs, financial support for career counseling in all high schools, and financial assistance for prospective college students (Spring, 1987, pp. 11-12).

Evaluations of the Compact in achieving its goals are described as "promising" (Spring, 1987, p. 12), reporting an increase each year between 1983-86 in the number of graduates who obtain jobs or attend postsecondary education, and reasonably high wages for Compact jobs for high school graduates in areas typically outside the fast food sector.

However, the school system's efforts appear less encouraging. For example, despite the fact that MCT results increased for all racial-ethnic groups in all grades between 1983 and 1985, during 1985-86 average scores dropped and in some grades "they dramatically decreased" (Hargroves, 1986, p. 21) <3>. Results concerning the goal of reducing the percentage of dropouts are even less encouraging. For each graduating cohort of students between 1982 and 1985, the percentage of dropouts increased modestly to the point that for 1985 43% of the cohort left school (Hargroves, 1986, p. 211).

These two sets of negative results, especially the consistent increase in dropout rates, suggest an inherent weakness in the design and implementation of the Compact in dealing with the most at-risk segment of the school population. The program appears to suffer from the age-old "creaming" phenomenon (McDill, McDill, and Sprehe, 1972, pp. 159-163; Commission on Work, Family, and Citizenship, 1988, p. 45) whereby social or educational amelioration programs frequently select the least disadvantaged subjects for treatment, leaving the most at-risk segment of the population unaffected. G. Gottfredson (1988), in an elaboration of his designation of the Boston Compact as a flawed example of a school-business partnership to ease the transition from school to work, provides a compelling criticism of the program:

> This {increase in dropout rates in Boston} parallels other results implying that promising jobs to students or dropouts that they continue in school does not reduce dropout (Hahn and Lerman, 1985). Why not? First, no single remedy or approach would be expected to be of much help in solving such a "multiply nested problem" (Mann, 1987). Equally important, however, the incentive structure of the Boston Compact (and similar programs elsewhere) may be wrong. It is the best students--the graduates--who are rewarded by the program; the employment incentives are clearest for them. It is the students with the poorest attendance, who are failing in school, who have already been retained in grade one or more times who are most likely to drop out of school *and* have the most difficulty finding well-paid and stable work *because* they have not demonstrated a record of behavior, attitudes, and scholastic

> performance that employers demand. It is this group of youths at which a program's incentives must be directed if it is to be effective in reducing dropout. It is the behavior and school performance of this group of students that the business community must improve if they are to become useful workers and affluent consumers. Finally, the Boston Compact's incentives are in the future, not "now." The future time perspective of students most at risk of dropout and adolescent problem behavior may often be somewhat limited, implying that to be effective incentives must be realized in the short-term (Gottfredson, 1987) (pp. 1-2).

The negative results from the Boston Compact concerning dropout rates are not unlike those from national assessments of the labor market preparation programs which were developed as a component of the Youth Employment and Demonstration Acts(YEDPA) which became federal law in 1977. YEDPA programs for in-school youth typically involved some combination of three basic elements which are similar to those of the Boston Compact: career exploration training, basic skills training, and direct work experience <4>. Results of the evaluations of these YEDPA initiatives are typically not positive (Betsey, Hollister, and Papagorgiou, 1985, Chap. 6) in that one of two conclusions was the norm: Either the methodological weakness of the evaluations did not permit reliable conclusions to be drawn or the treatments produced only marginally positive effects, which decayed rather quickly.

The dropout and most recent basic skills training results from the Boston Compact, in conjunction with those for YEDPA efforts, underscore the importance of G. Gottfredson's (1988) recommendation: "But what is needed is a program for incentives for those persons who are doing worst to do better than they are. The incentives must be realized in the form of rewards or recognition as progress is made, not later, if they are to be effective" (p. 2). His conclusion that no school system appears to have implemented such a task and reward system seems valid. We would add that when such a school-to-work incentive system is implemented, it should be conducted as a true experiment (involving random assignment of subjects to treatments) in order to rule out the types of selectivity bias which plague the Boston Compact and make it difficult to draw secure conclusions about programmatic effects.

I've Got a Dream

A second widely-publicized example of an incentive program to encourage students to remain in school and to establish realistic postsecondary plans is Eugene Lang's "I've Got a Dream" Foundation which in 1981 guaranteed financial support for college attendance to each member of the 6th grade in the elementary school of which he was an alumnus. The award was contingent on the student's completing high school with acceptable academic performance and avoiding the acquisition of a record with the criminal justice system which would interfere with college admission (Commission on Work, Family, and Citizenship, 1988, p. 51; Hahn and Danzberger, 1987, p. 39).

Mentoring, tutoring, other intensive support services, and follow-up of students for Lang's initiative have been provided by the Harlem Youth Action Corps (Hahn and Danzberger, 1985, p. 39). The effort has been emulated in varying degrees in a number of other urban centers. Of the original 6th grade cohort of students in the program, more than 90% (ie, 48 of 51) are reported to have remained in school, and approximately 90% (25 of 27) of this cohort who were graduated from high school in 1987 have been admitted to college (Commission on Work, Family, and Citizenship, 1988, p. 51). p. 51).

Although this program has been justifiably praised as a noble philanthropic initiative, its educational effectiveness has not been systematically demonstrated for a variety of methodological reasons. For example, there is an inherent self-selectivity bias in the design in that those students predisposed to attend college (and thus advantaged in a variety of related ways) are most likely to select themselves into the program. Further, this predisposition is likely reinforced by Hawthorne effects. That is, students in the program may be more likely to graduate from high school and more likely to attend college solely because of the public attention they receive (Commission on Work, Family, and Citizenship, 1988, p. 51) as a member of a select group and having nothing to do with the incentive structure of the program.

These methodological weaknesses can be completely eliminated only by a true experimental design with random assignment of subjects to at least three groups: an experimental group who receive the full benefits of the "Lang" treatment; a second treatment group who receive some form of favorable recognition but none of the incentives provided in the Lang program; and a control group who receive neither of the above two types of treatment.

Further, even if such an experiment produced outcomes favoring the first treatment group, there is the matter of cost effectiveness of the program. Could an alternative approach provide the same level of benefits at a lower cost per student?

Even ignoring the above methodological flaws and accepting the limited evidence on program effects as valid, there is doubt about the Lang program's effectiveness. Of the 51 self-selected subjects in the orginal 6th grade cohort (referred to above), it appears that only 25 (less than 50%) were graduated from high school on schedule and admitted to college. This is not an impressive percentage for a self-selected group of students who committed themselves to attend college six years earlier.

Category Four: *External Conditions*

In this section, we direct our attention to the current school-related (but often out-of-school) liabilities of the most disadvantaged youth which are widely believed to contribute to dropping out and a variety of earlier within-school deviant behaviors such as truancy, delinquency, and poor academic performance. These liabilities include a host of personal, familial, and community problems such as teenage pregnancy, alcohol and drug abuse, delinquent gang membership, single-parent families, family violence including child abuse, family financial need, and socially disorganized communities characterized by poor social control which is linked to a variety of forms of social deviance such as deliquent gangs, high rates of personal and property crime, and widespread distribution and consumption of drugs (Empey, 1978, Chap. 5; Gottfredson and Gottfredson, 1985, Chap. 5).

In attempting to deal with these most socially "estranged" (Hahn and Danzberger, 1987, p. 51) youth, schools have come to recognize that the reasons for their disaffection are multiple and interrelated, that such students often manifest a variety of nonconforming behaviors (Quay and Allen, 1982; McDill, et al, 1986; Neill, 1979), and that such behaviors are persistent over time from early in their school careers to well into adulthood (Gottfredson, 1987, p. 4). Given the versatility and perseverance of nonconforming behavior of the most disadvantaged segment of the at-risk population of youth, schools have come to realize that traditional structures and staffing are incapable of systematically addressing these problems. Thus they are beginning multifaceted and coordinated approaches to treating these manifold problems in collaboration with the public and private sectors (Bloch, n.d.) <5>.

Programmatic Models for External Conditions

To the limited extent that public policy analysis has influenced this more "holistic" view of youth problems, two somewhat overlapping theoretical perspectives or "metaphors" <6> (Fuller, 1981) have played a somewhat instrumental role -- the "subcultural" and "self-determined community development" models. These models differ somewhat from the functionalist economic model (relying heavily on human capital theory) discussed in the preceding section which underpins (at least implicity) many of the efforts aimed at providing a smooth transition from school to work by focusing heavily on teaching disadvantaged youth the basic cognitive and work-related skills for participation in the work force.

Adherents of the subcultural model, which has been described as corresponding closely to secondary labor market theory, are critical of the human capital perspective in that

> ...as many inner-city youth fail according to the schools' achievement norms and adults fail in terms of employers' criteria, youth values and motivation will functionally adapt. Forms of achievement are subsequently redefined and subcultural values emerge. Where youth and adults fail in school or at work, adaptive ways of coping, including alternative achievement norms, inevitably develop (Fuller, 1981, p. 175).

The self-determined community development model, which is related to the subcultural model in that it acknowledges the importance of subcultural and ethnic pluralism, emphasizes the idea of ameliorating social, economic, and educational ills by "maximum feasible participation of residents of the areas and members of the groups served" (U.S. Congress, 1964, p. 90; cited in Peterson and Greenstone, 1977, p. 42) <7>.

Without question, the prototype of the self-determined community development model is the Chicago Area Project organized in 1934 by Clifford B. Shaw of the University of Chicago. It was a deliquency prevention project based on three premises: (a) High rates of delinquency in poverty-stricken areas are a product of the social experiences in the family; (b) effective treatment and prevention can be attained only by constructive changes in the community life of the delinquent-prone individual; and (c) local residents must assume responsibility, both individually and collectively, for defining objectives, formulating and implementing policies, providing financial support, and exercising administrative control over funding, staffing, and programs (Korn and McCorkle, 1963, pp. 630-631).

The main programmatic activity of the Area Project was the establishment of youth welfare organizations among community residents and direct work with predelinquents, delinquent gangs, and adult offenders. Although there is no conclusive evidence about the effectiveness of the program in reducing delinquency rates in the areas served (Kobrin, 1959), it remains the model community program in deliquency prevention and treatment <8>.

A second and unique example of the community development model is the House of Umoja project. The House of Umoja is located in Philadelphia where it has been operating since the mid-seventies. David and Falaka Fattah, with new ideas and no formal training, opened their home to some of Philadelphia's toughest delinquents and were able through determination and local support to change the direction of the lives of some of the most troubled youth in their community.

The Fattahs felt that these young males needed a sense of stability and values that were unavailable in their neglected and abusive home environments. Umoja is unique, in that it is not an effort in implementing social science theory, but instead is a family support effort requiring the full contribution of each family member. It offers more than job skills training, education or housing; it advocates healthy social values and a respect for self, human worth and life itself (Woodson, 1981).

The key to the Umoja project may be the impact of mediators who act as translators and support networks between often hostile youth and the administrators of schools, welfare agencies, courts and programs designed to benefit at-risk youth. Mediators, particularly indigenous volunteers, have been successful in many delinquency prevention efforts such as the Chicago Area Project (Schlossman and Sedlak, 1983).

Currently, schools' participation in cooperative efforts with community agencies to mitigate the effects of out-of-school liabilities appears to range from minimal involvement (which is probably the norm) to participation as a full community partner, working in concert with a variety of human services agencies to provide several services such as recreation, drug abuse counseling, health, and sex education and counseling to at-risk students. An example of minimal participation is the school functioning merely as a *referral* agency to direct parenting teenagers to an alternative school which permits them to continue their schooling while the school provides on-site child care (Cahill, White, Lowe, and Jacobs, 1987).

New York City Dropout Prevention Program

An example of intermediate participation by the school is found in New York City's Dropout Prevention Program (DPP), which permits ten "laboratory" schools <9> (i.e., selected high schools with large concentrations of highly at-risk students) to select among four "models" (Herbert, n.d., Board of Education Dropout Prevention Program: Clarification of Models; Teachers

College, 1985-86). A variant of the "systemic" model is designed to serve the entire student body through overall strengthening of the school by providing a variety of services (remedial, health, recreational, etc.) *not* by the school itself, but by community agencies which use the school as a physical setting after school hours for discharging the services. Under this variation of the systemic model, the school functions more as a community resource than as a highly active participant in providing coordinated human services to students.

An example of maximum participation of schools in the integrated approach is also found in New York City's DPP -- the case management model in which the different services are provided to a targeted at-risk sample of students in the school rather than to the entire student body <10>. These services are delivered in the school by a team of human service workers from one or more community-based organizations (CB0's) under contract with the school (Bloch, n.d., p. 1). Students are referred to the team by a school referral committee who work closely with the case management team under the supervision of the case manager, who is generally a certified social worker.

New York City's DPP most likely represents the largest attendance improvement/dropout prevention program in the country. This initiative, which has a budget of roughly $40 million per year from both local and state sources, was launched in the 1984-85 school year. It serves specified high schools and their "feeder" middle schools with below-average attendance relative to city averages. The population of students served is very much an at-risk group, according to their attendance and course performance histories. Most high schools in the DPP had a choice among four program models: the systemic model (noted above) which attempts to serve the entire student body by strengthening the school *qua* school; the case management model (also noted above) which targets specific students for services; and the modified case management and systemic models which combine the two approaches in different proportions (Teachers College, 1985-86, p. 1). The models also vary as to whether the service providers are school personnel or community-based organizations from outside the school.

All programs provide an attendance component with attendance outreach services and incentives; a guidance and counseling component; a health component; school-level linkages to provide either high school orientation, joint activities between middle and high school students, or transitional guidance services; and alternative education consisting of high-interest programs designed to encourage attendance and improve achievement. Some programs have an instructional component as well.

Evaluations of the early years of the DPP have not found success in improving attendance and course performance or decreasing the likelihood of dropping out (Grannis, Pallas, Riehl, Crain, and Bailey, 1987 a, b; Office of Educational Assessment, 1987 a, b). The high risk students targeted for services by the program continue to perform poorly, although they many have done worse without the program. The most telling finding is that the vast majority of targeted students are not accumulating academic credits at a pace that would allow them to graduate from high school in a reasonable amount of time. This result emphasizes that merely retaining students in school is not sufficient to produce competent high school graduates.

Inspection of the various evaluation reports of DPP leads to the conclusion that many of the problems are in the implementation and monitoring phases. For example, in the first year of operation (1985-86) there were start-up delays, coordination problems between schools and CBO's, inadequate health resources, and confusion about which models to implement in the schools (Teachers College, 1985-86). There is some evidence to suggest that some of these problems were rectified during year two; nevertheless, monitoring of the program remained clearly inadequate in that data on attendance were missing for 30% of the targeted middle school students in 1985-86 and/or 1986-87 (Teachers College, 1986-87).

Far more serious, however, is the lack of a true experimented design anywhere in this enormous effort, which would permit a valid assessment of treatment effects of the various models. Without such a design, it is impossible to determine with a high degree of exactitude which, if

any, of the various approaches is effective, even if they are being implemented and monitored with fidelity. Such a rigorous study design is especially important when dealing with the most disadvantaged segment of the at-risk population, because observed changes in students' behavior may be partly or even totally attributable to regression artifacts.

Evidence of such bias exists in the evaluation results at the end of year one: those students with the most absences from school and performing poorest in the preceding year actually improved the most in both respects, while the performance and attendance of the less disadvantaged students deteriorated over the year. This is an instance of the familiar "regression to the mean" phenomenon which can seriously bias programmatic results and lead to specious conclusions (Campbell and Erlebacher, 1970 a, b).

Moving beyond such methodological issues, the DPP and a host of other dropout programs may have a more fundamental problem: namely, are they misdirected in being applied too late in students' school careers to have a significant and lasting impact? The recent burgeoning literature on dropout prevention and remediation, building on the assessments of a multitude of compensatory education programs and delinquency prevention programs over the past thirty years, almost universally concludes that such ameliorative efforts should begin in the early school years; should be focused, intensive, and continuous throughout the school career, and should provide as wide an array of services as feasible (Gottfredson, in press; Commission on Work, Family, and Citizenship, 1988; Danzberger, 1987; Natriello, McDill, and Pallas, 1987).

Applying these criteria to the DPP reveals that it appears to meet only one of them -- a wide array of services. Even here there is a serious question regarding whether the array of services is being applied in an adequate manner (Teachers College, 1985-86, 19 86-87). It may be that the services delivery problems are attributable to the newness of the DPP and will be solved with additional experience.

However, even if dropout and deliquency programs meet these criteria, success is not guaranteed, as evidenced by the long history of deliquency prevention programs. For example, the Cambridge-Somerville Youth Study (Powers and Witner, 1951; McCord and McCord, 1959) is the best known (and perhaps most sophisticated) in the history of juvenile delinquency research. Conducted between 1936 and 1945 as a true experiment and employing a case management approach, the treatment group of more than 300 predelinquent boys were provided "...all the services which ideally probationers are supposed to receive: individual counseling, family guidance, tutoring, medical treatment, correctional services, and even occasional financial assistance. But contrary to theory and hope, repeated follow-up studies made 5, 10, and 25 years after treatment revealed no significant differences between the treated and untreated children..." (Empey, 1978, pp. 510-511) in terms of subsequent records of delinquent and criminal acts <11>. More disturbing, a thirty-year follow-up of the subjects (McCord, 1978, 1981) revealed that members of the treatment group were more likely to have undesirable outcomes such as serious crime, mental illness, and alcoholism <12>.

Reviewing a host of delinquency prevention programs since the Cambridge-Somerville effort which employed similar case management models and alternative approaches, Empey (1978) concludes that "treatment programs that appeared to embody many of the ideals of rehabilitation were no more effective in preventing and controlling crime than no program at all" (p. 511). These sobering results and those from a host of evaluations of compensatory education programs which indicate that the most carefully designed and implemented interventions have only modest, temporary, cognitive effects (Mullin and Summers, 1983; Levin, 1985; Natriello, et al, 1988) are vivid testimony to the daunting nature of the challenge faced by the education community. The evidence from these assessments also indicates that early and prolonged educational *and* behavioral management is necessary if significant progress is to be achieved (Gottfredson, 1987). Unfortunately, these programmatic characteristics seem to be missing, for the most part, from the large-scale dropout and delinquency prevention and remediation programs of large cities such as New York City's DPP.

Assessing the Typology

Our goal in this paper is to develop a typology for classifying current knowledge and organizing further thinking about dropout prevention approaches. After drawing the distinction between delivery elements (questions of timing, targeting and managing) and substantive components, we developed four substantive categories for our typology. Further work needs to be done to assess whether this short straightforward set of categories is sufficient to treat the different dropout programs now in practice. We need to consider whether some other major sources of the dropout problem cannot be accurately fit into our four-way typology. Can this typology be usefully applied when auditing a school system's dropout prevention approaches or when planning new dropout prevention techniques? Does the typology help us identify gaps in knowledge or practice?

It does not take a new typology to recognize the enormous gaps in research knowledge about what alternative programs actually work to reduce the dropout rates. We were only able to find a few evaluation studies of dropout prevention approaches that met reasonable scientific standards, and even less that used randomized designs in the evaluation. Clearly, more value needs to be placed on evaluations in conducting dropout prevention interventions and more scientific resources needed to provided to assess program impacts.

One weakness of the typology is its static character, when dropping out is actually a process that develops over time. A student does not get classified as a dropout usually as the result of a single decision one day by the individual that enrollment in school is no longer of interest. Dropping out is usually not a final, explicit decision by a student to leave school or by a school official to terminate a student. More often an individual begins a pattern of off-and-on attendance that grows over time into an even more intermittent attendance pattern until the individual finally stops coming to school altogether. It often would be more accurate to speak of the "driftout" problem than the "dropout" problem.

The "driftout" can become the "dropout" in several ways. Poor attendance early in the term makes even worse attendance more likely later in the year, because students who miss some classes will inevitably find it hard to reconnect with school, having missed lessons that are pre-requisite to later instruction or otherwise feeling lost in class. Also, good school grades are also often tied by teachers' grading practices to good attendance, so students are more likely to fail courses when they frequently skip class even if they were somehow able to keep up with the material.

Moreover, the process toward dropping out usually begins with a student being retained in the early grades and becoming increasingly discouraged about school success with each passing year. Our typology does not address the gradual process of dropping out and that is one of its weaknesses.

Perhaps the most valuable feature of the typology will be to assist planning by identifying gaps in practice and generating new ideas. A school system could assess its own program by asking whether all categories have been addressed in its various approaches.

Perhaps we can also find new approaches not yet tried in various school systems by using the typology, since some cells of our typology appear to lack actual intervention cases to address specific theoretical possibilities. For example, we found no actual experiments to modify the criteria of academic tasks to bring classroom success more into the reach of "at risk" students, even though this theoretical possibility emerges from our first category. Also, immediate ways to tie school behavior to occupational goals seem underdeveloped in practice, since good ideas that have been around for a while seem to go unused, such as the proposal to offer a "Career Passport" or a "Career Portfolio" to students that records all the positive school achievements of the individual (like good attendance, participation on clubs or teams, and one's best courses) to be used in job interviews and applications. This idea, developed years ago by Willard Wirtz's School and Work Institute, recognizes that employers now rarely use school information in hir-

ing decisions because it is not accessible at the time needed, even though data on a recent graduate's good school habits would be of great interest to employers. Making this data available would increase the relevance of school attendance and other good behavior in school that all students can achieve.

We need further work with the typology to identify other gaps in actual practice or good ideas not yet tried. If the typology is useful, it should be able to generate additional proposals to fill the other gaps in practice.

Footnotes

1. "...high school rebellion, and expressive alienation, are most common among students who do not see themselves gaining an increment of future status from conformity in high school" (Stinchcombe, 1964, p. 49). This perspective was earlier expressed in the "sub-cultural" formulations of gang delinquency of Cohen (1955) and of Cloward and Ohlin (1960). However, neither of these sets of authors attempted to test systematically their propositions using first-hand evidence. We return to the subcultural perspective in the next section.

2. See for example, Ogbu, 1974; Willis, 1977; and Fine, 1986 (cited in the Grant Foundation, 1988, pp. 28 and 82). In fact, the Grant Foundation, in its recent report, *The Forgotten Half: Non-College Youth in America* (1988), avowedly subscribes to the articulation hypothesis:

> When they {young people} observe a direct relationship between what they do in school, their work experience, and accessible future careers, they are more willing to make present sacrifices in hope of future gains. When they believe their futures will be dim regardless of their own effort, they have less incentive to behave in personally and socially responsible ways (p. 28).

The Grant Foundation report is merely the latest of a series of documents issued by blue-ribbon panels in the past fifteen years to address the broad problem of the link between secondary schools and youth socialization. For example, as noted by Coleman and Husen (1985), five such reports were issued in the U.S. in the 1970's by prestigious panels, "...all beginning from the premise that the larger society's principal institution of socialization, the school, was not functioning properly" (p. 20). The best known of these, *Youth: Transition to Adulthood* (Coleman, 1974), produced by the President's Science Advisory Committee (PSAC), strongly advocated a lessening of the school's isolation from other institutional spheres of society through diversification of schools, more experiential learning, and closer linkages between school and the world of work. Coleman and Husen (1985) have

recently updated the PSAC report for the Organization for Economic Cooperation and Development (OECD). They attempt to account for the current linkages and changes among the institutions of work, the family, and school as they influence the transition from youth to adulthood and to specify institutional innovations which can smooth this transition.

2(a). This perspective is part of the broader "functionalist paradigm of schooling" which "...views the close relationship between schooling and future status in contemporary society as an essentially rational process of adaptation: a process where the needs of the increasingly complex society for talented and expert personnel are met by outputs from the educational system" (Hurn, 1985, p. 51). The functionalist model, the articulation hypothesis, and the "subcultural" and "self-determined community development models" (to be discussed in the next section), although often in disagreement in specific regards, are interrelated in other respects. As noted by Fuller (1981), "...evidence questioning one model often prompts a new view of the problem and ways of building social programs" (p. 170).

3. Hargroves attributes part of this decline to a re-norming of the results from the Metropolitan Achievement Test. However, she also notes that for most grades Boston students are below national norms in reading and math achievement.

4. In fact, to a considerable degree the Compact is an outgrowth of a large labor market preparation project sponsored by YEDPA (Spring, 1987, p. 11).

5. The Grant Foundation (1988, p. 95) states precisely the premise underlying this newer approach: "Programs should offer multiple options and comprehensive services. Problems of high risk youth have many causes. Therefore, piecemeal approaches won't work."

6. Our discussion of these perspectives relies heavily on Fuller (1981).

7. Without doubt, the most ambitious example of such a community effort is the Community Action Program, (CAP), a part of President Johnson's War on Poverty legislation enacted in 1964. CAP involved the concept of comprehensive, coordinated, and community-wide planning and implementation of programs focused on combatting poverty. The local mechanism for coordination and implementation of efforts was "...the community action agency - a public or private agency designed to pull a locality's existing institutional resources together and to develop...a functional agenda for its need in fighting poverty" (Levitan, 1969, p. 63). The program was intended to restructure social services to poverty-stricken citizens in several ways, including extensive policy-making of clients served by the program and coordination of services at the local level. Peterson and Greenstone (1977, pp. 246-247) assess the CAP as follows:

> Community action programs most certainly increased the number and kind of social services available to low-income authorities. As other essays in this volume demonstrate, its programs provided training in basic and practical skills, supported legal services to the poor, helped expand such nutritional programs as food stamps, and gave children a "head start". But these were additions and supplements to existing service delivery systems. As an agency for rationalizing and coordinating local government efforts, CAP's barely made a beginning.

8. Not only has it been applied in Chicago over the years, but special legislation was passed in Illinois and a Juvenile Delinquency Prevention Commission created, so that the model developed by Shaw could be utilized and applied throughout the state. In no other locale has such a feat been duplicated, combining both theoretical and applied work over such a long period of time (Empey, 1978, p. 257).

9. Twenty-nine "feeder" middle schools are also involved in the program.

10. Another example of maximum participation in the DPP is a variant of the systemic model in which the school contracts with CBO's to provide services to the entire school population.

11. It is noteworthy that the median age for subjects was 10.5 years, which may have been too late for the types of counseling employed to be effective. The evidence is unequivocal that predispositions toward delinquent and dropout behaviors are detectable quite early in the school career (Gottfredson, in press; Robins and Ratcliff, 1980). Quay (1978) contends that students labelled "emotionally disturbed" or "serious delinquents" often are dropout prone, and he argues that more recent research has revealed that behavior modification techniques, if carefully applied in the school setting, can significantly reduce misbehavior and enhance the acquisition of prosocial behavior and academic skills (cited in McDill, et al, 1986, p. 164).

In a provocative analysis and interpretation of data from the thirty-year follow-up of the subjects, McCord (1981) concludes that the most plausible explanation (among four considered) for the negative effects of treatment was that "The Cambridge-Somerville Youth Study seems to have raised the expectations of clients without also providing the means for increasing satisfactions. The resulting disillusionment seems to have contributed to the probability of having an undersirable outcome" (p. 405).

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